

APPENDIX H. Glossary

Air Basin:	A land area with generally similar meteorological and geographic conditions throughout. To the extent possible, air basin boundaries are defined along political boundary lines and include both the <u>source</u> and receptor areas. California is currently divided into 15 air basins.
Air District:	A political body responsible for managing air quality on a regional or county basis. California is currently divided into 35 air Districts. (See also <u>Air Pollution Control District</u>).
Air Pollutants:	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects to humans, animals, vegetation, and/or materials. (See also <u>air pollution</u> .)
Air Pollution:	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere.
Air Pollution Control District (District):	A county agency with authority to regulate stationary and area sources of air pollution (e.g., power plants, highway construction, and housing developments) within a given county, and governed by a District air pollution control board composed of the elected county supervisors.
Air Quality Management Plan (AQMP):	A plan prepared by an District / APCD, for a county or region designated as a nonattainment area, for the purpose of bringing the area into compliance with the requirements of the national and / or California ambient air quality standards. AQMPs are incorporated into the State Implementation Plan (SIP).
Area Sources:	Those sources for which a methodology is used to estimate emissions. This can include area-wide, mobile and natural sources and also groups of stationary sources (such as dry cleaners and gas stations).
Atmosphere:	The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium and radioactively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition, the atmosphere contains the greenhouse gas water vapor, whose amounts are highly variable but typically around 1% volume mixing ratio. The atmosphere also contains clouds and aerosols
California Air Pollution Control Officers Association (CAPCOA):	A nonprofit association of the air pollution control officers from all 35 air quality agencies throughout California. CAPCOA was formed in 1975 to promote clean air and to provide a forum for sharing of knowledge, experience, and information among the air quality regulatory agencies around the state. CAPCOA is an organization of air quality professionals--leaders in their field -- who promote unity and efficiency, and strive to encourage consistency in methods and practices of air pollution control.
California Air Resources Board (CARB):	The State's lead air quality agency consisting of an eleven-member board appointed by the Governor and several hundred employees. CARB is responsible for attainment and maintenance of the state and federal air quality standards, and is fully responsible for motor vehicle pollution control. It oversees county and regional air pollution management programs.
CalEEMod:	Quantifies potential criteria pollutant and greenhouse gas (GHG) emissions associated with construction and operation from a variety of land uses, such as residential and commercial facilities. The model quantifies direct emissions from both construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance.
CALINE-4:	A model developed by the Air Resources Board that calculates carbon monoxide concentrations resulting from motor vehicle use.

California Environmental Quality Act (CEQA):	A California law that sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process aids decision makers to determine whether any environmental impacts are associated with a proposed project. It requires environmental impacts associated with a proposed project to be eliminated or reduced, and that air quality mitigation measures are implemented.
Carbon Dioxide (CO ₂):	The most common of the six primary GHGs. A naturally-occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance.
Carbon Dioxide Equivalent (CO ₂ e):	A metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas. Carbon dioxide equivalents are computed by multiplying the mass of the gas emitted by its global warming potential.
Carbon Monoxide (CO):	A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. Over 80 percent of the CO emitted in urban areas is contributed by motor vehicles. CO is a criteria air pollutant.
Climate Action Plan:	A set of strategies intended to guide community efforts for reducing greenhouse gas emissions which focuses on improving energy efficiency and conservation in homes and businesses, as well as strategies to reduce emissions from transportation sources.
Climate Change:	Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.
Criteria Air Pollutant:	An air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM ₁₀ and PM _{2.5} . The term "criteria air pollutants" derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. The U.S. EPA and CARB periodically review new scientific data and may propose revisions to the standards as a result.
Cumulatively Considerable:	CEQA Guidelines §15064 (h)(1) defines "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
Dust:	Solid particulate matter that can become airborne.
EMFAC:	A software package used to calculate emission rates from all motor vehicles, such as passenger cars to heavy-duty trucks, operating on highways, freeways and local roads in California.
Emission Factor:	For stationary sources, the relationship between the amount of pollution produced and the amount of raw material processed or burned. For mobile sources, the relationship between the amount of pollution produced and the number of vehicle miles traveled. By using the emission factor of a pollutant and specific data regarding quantities of materials used by a given source, it is possible to compute emissions for the source. This approach is used in preparing an emissions inventory.
Federal Clean Air Act (FCAA):	A federal law passed in 1970 and amended in 1974, 1977 and 1990 which forms the basis for the national air pollution control effort. Basic elements of the act include national ambient air quality standards for major air pollutants, mobile and stationary control measures, air toxics standards, acid rain control measures, and enforcement provisions.



PM₁₀CO₂

ROG

O₃SF₆NO_xCO₂ECH₄N₂OH₂OCH₄

HFC

ROG

O₃SF₆NO_xSF₆NO_xCO₂ECH₄PM₁₀CO₂

ROG

O₃SF₆

Fugitive Dust:	Dust particles that are introduced into the air through certain activities such as soil cultivation, or vehicles operating on open fields or dirt roadways. A subset of fugitive emissions.
Global Warming:	Global warming is an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities. Also see Climate Change.
Greenhouse Gases (GHG):	Greenhouse gases include carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF ₆), defined by California Assembly Bill 32.
Health Risk Assessment (HRA):	A document that identifies the risks and quantities of possible adverse health effects that may result from exposure to emissions of toxic air contaminants. A health risk assessment cannot predict specific health effects; it only describes the increased possibility of adverse health effects based on the best scientific information available.
Level of Service (LOS):	Level of service (LOS) is a qualitative measure used to relate the quality of traffic service. LOS is used to analyze roadways by categorizing traffic flow and assigning quality levels of traffic based on performance measure like speed, density, etc.
Metric Ton (MT):	The tonne (t) or metric ton, sometimes referred to as a metric tonne, is an international unit of mass. A metric ton is equal to a Megagram (Mg), 1000 kilograms, 2204.6 pounds, or 1.1023 short tons.
Mobile Sources:	Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes
National Ambient Air Quality Standards (NAAQS):	Standards established by the United States EPA that apply for outdoor air throughout the country. There are two types of NAAQS. Primary standards set limits to protect public health and secondary standards set limits to protect public welfare.
New Source Review (NSR):	A Clean Air Act requirement that State Implementation Plans must include a permit review, which applies to the construction and operation of new and modified stationary sources in nonattainment areas, to ensure attainment of national ambient air quality standards. The two major requirements of NSR are Best Available Control Technology and emission offsets.
Nitrogen Oxides (NO _x):	A general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO ₂) and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO ₂ is a criteria air pollutant and may result in numerous adverse health effects.
Nitrous Oxide (N ₂ O):	Is a chemical compound with the formula N ₂ O. At room temperature, it is a colorless non-flammable gas, used in surgery and dentistry for its anesthetic and analgesic effects. It is also used as an oxidizer in rocketry and in motor racing to increase the power output of engines, as well as a propellant.
Nonattainment Area:	A geographic area identified by the U.S. EPA and / or CARB as not meeting either NAAQS or CAAQS standards for a given pollutant. For more information, please view our designated areas website.
OFFROAD:	A software package that is developed by CARB used to generate and calculate emissions inventory data for off-road mobile sources.
Ozone (O ₃):	Ozone, the triatomic form of oxygen (O ₃), is a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (smog). In the stratosphere, it is created by the interaction between solar ultraviolet radiation and molecular oxygen (O ₂). Stratospheric ozone plays a dominant role in the stratospheric radiative balance. Its concentration is highest in the ozone layer

Particulate Matter:	Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products. For more information, please take a look at our PM brochure.
PM _{2.5} :	Includes tiny particles with an aerodynamic diameter less than or equal to a nominal 2.5 microns. This fraction of particulate matter penetrates most deeply into the lungs..
PM ₁₀ :	A criteria air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 10 microns (about 1/7 the diameter of a single human hair). Their small size allows them to make their way to the air sacs deep within the lungs where they may be deposited and result in adverse health effects. PM ₁₀ also causes visibility reduction.
Precursor(s):	Compounds that change chemically or physically after being emitted into the air and eventually produce air pollutants. For example, reactive organic gases and nitrogen oxides are precursors to ozone.
Reactive Organic Gasses (ROG):	A photo chemically reactive chemical gas composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Non-Methane Organic Gases (NMOGs).
Health Risk Assessment (HRA):	An evaluation of health risk which estimates the relationship between exposure to a harmful substance and the likelihood that harm will result from that exposure.
Sensitive Receptors:	Facilities or land uses that include members of the population which are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.
Significance Threshold:	Under CEQA, every agency in the state "is encouraged to develop and publish thresholds of significance" against which to compare the environmental impacts of projects. A lead agency will normally consider the environmental impacts of a project to be significant if and only if they exceed established thresholds of significance.
State Implementation Plan (SIP):	A plan prepared by states and submitted to U.S. EPA describing how each area will attain and maintain national ambient air quality standards. SIPs include the technical foundation for understanding the air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. (See also AQMP).
Stationary Sources:	Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.
Toxic Air Contaminants (TAC):	An air pollutant, identified in regulation by the CARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. TACs are considered under a different regulatory process (California Health and Safety Code section 39650 et seq.) than pollutants subject to CAAQS. Health effects to TACs may occur at extremely low levels, and it is typically difficult to identify levels of exposure which do not produce adverse health effects.
Toxic Hot Spot:	A location where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects -- including but not limited to cancer -- and contribute to the cumulative health risks of emissions from other sources in the area.
United States Environmental Protection Agency (U.S. EPA):	The federal agency charged with setting policy and guidelines, and carrying out legal mandates for the protection of national interests in environmental resources.
Vehicle Miles Traveled (VMT):	The miles traveled by motor vehicles over a specified length of time (e.g., daily, monthly or yearly) or over a specified road or transportation corridor.

